ENDOSCOPIC CLOSURE OF A PERSISTENT BRONCHO-PLEURAL FISTULA WITH FIBRIN GLUE IN A CHILD

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A 16 year old girl with A gammaglobulinaemia, was previously treated for pulmonary tuberculosis and developed bronchiectasis of her right lung. Right sided pneumonectomy was done in 2001. She developed empyema in June 2005. Stump break down was confirmed and a surgical repair was done. The stump leak re-occurred in November 2005. Muscle was used to close the stump surgically and a thoracoplasty was performed. Mycobacterium Tuberculosis was cultured again and she completed TB treatment.

On examination of the chest air entry was audible over the right hemithorax. Chest X-ray demonstrated an air collection on the right. Stump break down with a leak was confirmed by ventilation scan. Flexible bronchoscopy demonstrated an intact right bronchial stump but an air leak was visible on the left side of the carina. As further surgical correction was not possible bronchoscopic closure was attempted by roughening the edges of the fistula with a biopsy brush and then injecting human fibrin glue (Tisseel®) into the fistula via a catheter trough the working channel of the bronchoscope. Closure of the broncho-pleural fistula was confirmed by ventilation scintigraphy one week after the procedure and again at 1 and 3 months.

Conclusion: Closure of persistent broncho-pleural fistula after pneumonectomy, using human fibrin glue, is a safe and effective option in children. Long term follow up will determine if the fistula remains closed.